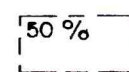


This report has not been edited for conformity with U.S. Geological Survey editorial standards or stratigraphic nomenclature.

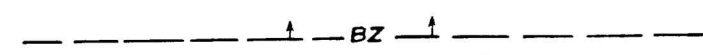
EXPLANATION



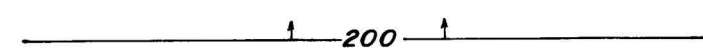
NON-FEDERAL COAL LAND -- Land for which the Federal Government does not own the coal rights.



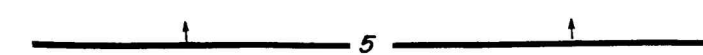
RESTRICTED FEDERAL COAL RIGHTS--Showing the percentage of Federal Government ownership.



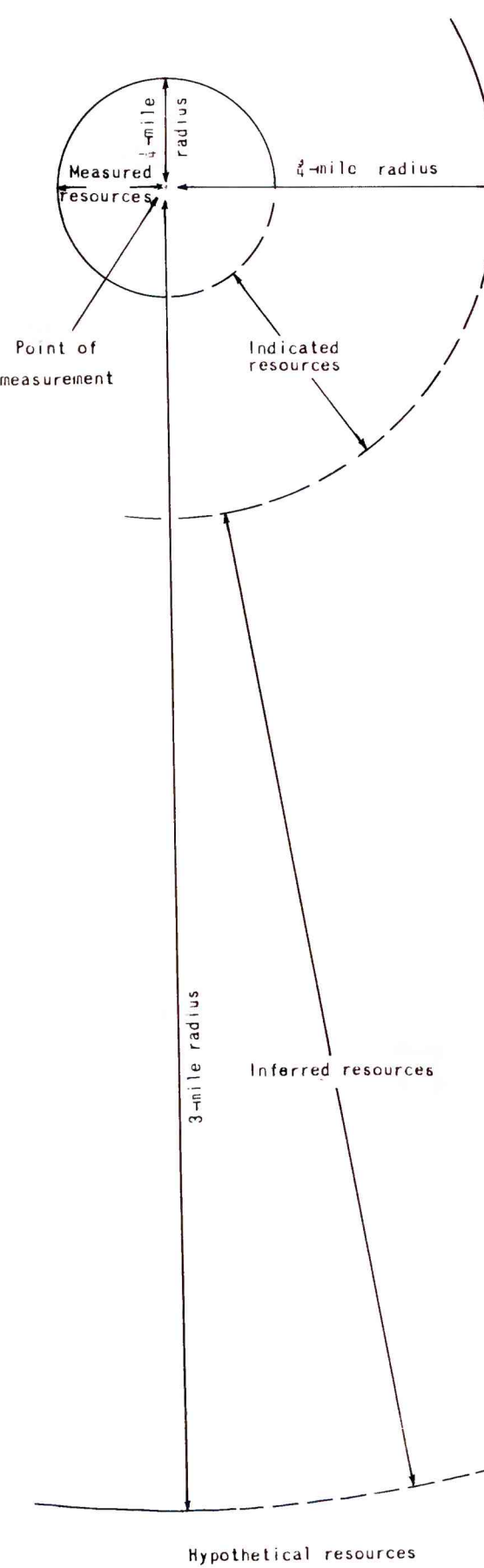
TRACE OF INFERRED COAL BED OUTCROP--Arrow points toward coal bearing area.



200-FOOT OVERBURDEN ISOPACH--Used as boundary for surface mining. Arrows point toward area suitable for surface mining.



LIMIT OF RESERVE BASE COAL--5 foot coal isopach or 1000 foot overburden line. Arrow points toward reserve base coal.



BOUNDARY LINES--Showing areas of measured, indicated, inferred, and hypothetical coal reserves. Dashed where projected from adjacent quadrangles.

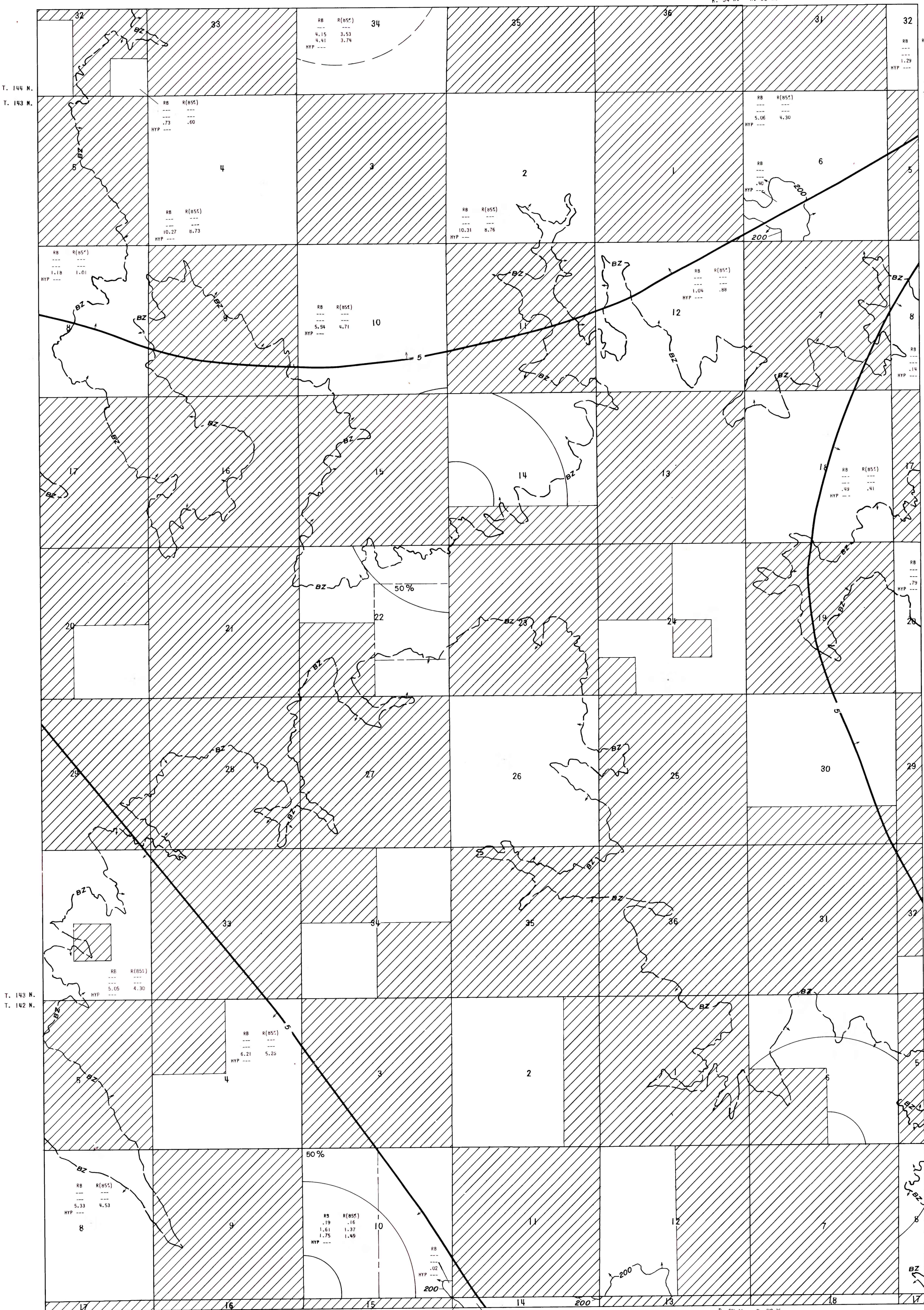
RB	R(85%)	
4.8	4.1	(Measured resources)
42.4	36.0	(Indicated resources)
65.5	55.7	(Inferred resources)
HYP 1.3		(Hypothetical resources)

IDENTIFIED AND HYPOTHETICAL COAL RESOURCES--Showing totals for Reserve Base (RB) and, in areas suitable for surface mining, Reserves (R), in millions of short tons by section. Dash indicated no resources in that category. Reserve Base (RB) x Recovery Factor (85%) = Reserves (R).

Recovery factors have not been established for underground development of the coal in this quadrangle. Therefore, Reserves (R) were not calculated in areas where the overburden thickness exceeds 200 feet.

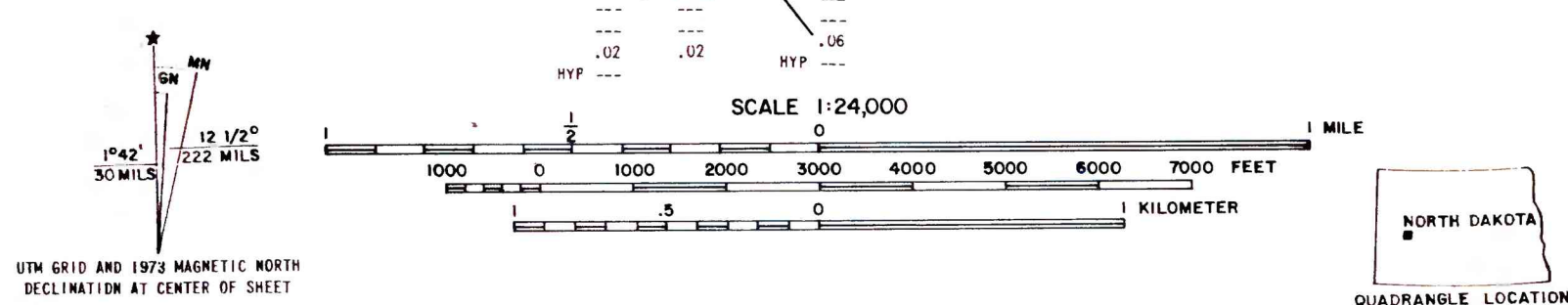
To convert feet to meters, multiply feet by 0.3048.

To convert short tons to metric tons, multiply short tons by 0.9072.



BASE FROM U.S. GEOLOGICAL SURVEY, 1970

COMPILED IN 1978



COAL RESOURCE OCCURRENCE MAP OF THE ZINER BUTTE QUADRANGLE,  
DUNN COUNTY, NORTH DAKOTA

BY  
WOODWARD-CLYDE CONSULTANTS  
1978